

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Christian Block et al.
Serial No. : 10/526,278
Filed : March 1, 2005
Title : CIRCUIT ARRANGEMENT

Art Unit : 2836
Examiner : Scott Allen Bauer
Conf. No. : 6665

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PRE-APPEAL BRIEF REQUEST FOR REVIEW

We request that a panel of Examiners review the rejections made by the Examiner because of clear legal or factual deficiencies discussed below.

Claims 22-44 are pending, of which claim 22 is independent.

Claims 22 and 41-43 were rejected under 35 U.S.C. § 103(a) over Mueller (U.S. Patent 3,968,411) in view of Yrjölä (U.S. Patent No. 5,521,561).

We specifically request the panel to review the following issues:

1. Whether it would have been obvious to select the claimed breakdown voltage in view of the applied art.
2. Whether the combined teachings of Mueller and Yrjölä render obvious independent claim 22.
3. Whether it is incorrect to apply the same rationale in rejecting claim 22 to further reject claims 42 and 43 which recite the “mobile phone” in the body of the claims.

We reserve the right to expand these issues or present new issues when filing an appeal brief.

1. Whether it would have been obvious to select the claimed breakdown voltage.

Independent claim 22 is directed to circuitry for use with a mobile telephone. The circuitry comprises a terminal for use with a high-frequency signal, at least two signal lines, a switching unit for connecting the terminal to a signal line, and a primary protection device for protecting against electrostatic discharges. The primary protection device is between the terminal and the switching unit, and the primary protection device comprises a first element that

diverts all voltages having a pulse height greater than a 200V switching voltage to a reference potential. Mueller is understood to describe a protective device comprised of spark gap devices 20, 22 between an antenna base and a switch 18, and another spark gap device 24 between switch 18 and receiver 16 (see reproduced Fig. 1 below).

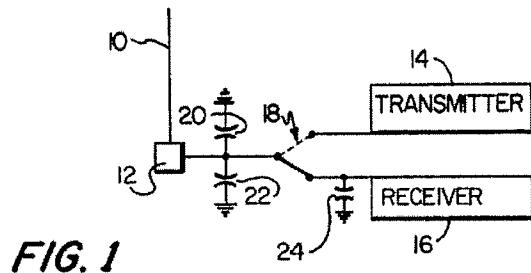


FIG. 1

As explained in Mueller

Spark gap devices 20, 22 and 24 may be any commercially available spark gap device. For one radio system in which the present system has been installed, spark gap devices having a capacitance of approximately 1pf apiece and a breakdown DC voltage of 9,000 volts was used. These numbers are mere examples and any spark gap device having the proper breakdown voltage and minimum capacitance can be used.¹ (emphasis added)

Thus, in Mueller, the spark gap devices require a voltage of at least 9,000V (9kV) to divert the voltage to ground. Therefore, Mueller clearly does not divert *all voltages* having a pulse height greater than a 200V switching voltage. We note that Mueller explains that its numbers are mere examples and that "any spark gap device having the proper breakdown voltage and minimum capacitance can be used". However, spark gap devices are used to effect large electrical discharges. Therefore, technically speaking, the teachings of Mueller would not describe or suggest a protection circuit of a mobile phone to divert *all voltages* having a pulse height greater than a 200V, as required by claim 22.

The Examiner acknowledges that Mueller does not specifically state that the primary protection device diverts all voltage over 200V², but persists in asserting that selecting a proper breakdown voltage of the protection device would have been obvious. The Examiner also cites

¹ Col. 3, lines 7 to 15

² Final Office Action page 3.

case *In re Aller*³. We contend that the situation in *Aller* is distinguishable from the present claims, because in *Aller* the claims were rejected by a single reference in the same technology field operating in a different range. However, by contrast, in this case, the Examiner is attempting to combine two devices in two different fields of technology.

For at least the reasons given above, we respectfully request withdrawal of the rejection.

2. Whether the combined teachings of Mueller and Yrjölä render obvious independent claim 22.

Perhaps recognizing the weakness of the assertion above, in response to our arguments, the examiner asserts:

the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

As stated in the reply to Office Action dated May 3, 2007, claim 22 is directed to circuitry for use in a mobile telephone, whereas the circuitry described in Mueller is for use with 1970's technology radio systems.⁴ Circuitry for use in a mobile telephone requires significantly lower voltages than the 1970's radio systems described in Mueller. Therefore, we submit that there is no suggestion in Mueller to use its spark gap or other protective device in the context of circuitry for a mobile telephone to divert to all voltages having a pulse height greater than a 200V.

In this regard, Mueller reads:

to provide protection of a transmitter/receiver system, operating at two to 30mHz, from high amplitude, short duration electromagnetic transients.⁵

³ *In re Aller*, claimed process which was performed at a temperature between 40°C and 80°C and an acid concentration between 25% and 70% was held to be prima facie obvious over a reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%.

⁴ Mueller was filed in 1975

⁵ Col. 2, lines 9 to 12

Mueller also states that

The two spark gap devices 20 and 22 are connected near the base 12 of the antenna 10 and sense high amplitude, short duration electromagnetic transients in less than 10 nanoseconds and shunts the transients to ground.⁶

Mueller therefore has a sensing bandwidth of about 100MHz ($f=1/\tau$). Given its operating frequency and sensing bandwidth, Mueller is clearly for use with short wave radio applications. Short wave radios are not used in mobile telephony, which often may be required to operate at frequencies of up to 2GHz.⁷

The Examiner merely isolates the features “transmitter/receiver circuit” and “protection circuit therefore” of Mueller and combines those features with the isolated feature “transmitter/receiver circuit of mobile phone” of Yrjölä. We contend that the combination of two references made by the Examiner is based upon an assumption that any technologies can be integrated into functional applications regardless of technological limitations. Neither of the references can provide an incentive that the protection circuit of Mueller’s radio transmission device is suitable for, and combinable with, a mobile phone. Furthermore, neither of the references teach or suggest circuitry in a mobile phone having a primary protection device that diverts all voltages having a pulse height greater than a 200V switching voltage to a reference potential.

There is nothing in the references that provides a basis for the examiner’s assertion. Accordingly, we respectfully request withdrawal of these rejections.

3. Whether it is incorrect to apply the same rationale in rejecting claim 22 to further reject claims 42 and 43 which recite the “mobile phone” in the body of the claims.

⁶ Col. 2, lines 51 to 55

⁷ See, e.g., page 15, lines 4 to 7 of the translation

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Attorney's Docket No.: 14219-079US1
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The Examiner relies on *Ex parte Masham*, 2 U.S.P.Q. 2d 1647 (1987)⁸ to reject claims 22, 42 and 43. In particular, it is alleged that a recitation of a use limitation in the preamble of a claim cannot differentiate the claim from the prior art. We contend that the Examiner's reliance on *Ex parte Masham* is misplaced. As presented above, Mueller does not describe or suggest all the structural limitations of claim 22. Moreover, claims 42 and 43 both recite the "mobile phone" in the body of the claims. Yet, these claims remain rejected using the same rationale and prior art as claim 22. Thus, even assuming that it were proper to wholly discount the preamble (a point that we do not concede), claims 42 and 43 should be patentable for at least the reasons explained above.

In view of the above, all of the claims should be in condition for allowance. A formal notice of allowance is thus respectfully requested. Please apply any other required fees to deposit account 06-1050, referencing the attorney docket number 14219-079US1.

Respectfully submitted,

Date: May 13, 2008



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⁸ In *Masham*, a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987) (The preamble of claim 1 recited that the apparatus was "for mixing flowing developer material" and the body of the claim recited "means for mixing ... , said mixing means being stationary and completely submerged in the developer material". The claim was rejected over a reference which taught all the structural limitations of the claim for the intended use of mixing flowing developer. However, the mixer was only partially submerged in the developer material. The Board held that the amount of submersion is immaterial to the structure of the mixer and thus the claim was properly rejected.).